

Networking Transportation

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6/13/2017



CONNECTIONS
2045

GREATER PHILADELPHIA
FUTURES GROUP
ENGAGE. COLLABORATE. ENVISION

DELAWARE VALLEY
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REGIONAL
PLANNING COMMISSION

DVRPC



Metropolitan Planning Organization (MPO):

- Long-Range Plan
- Transportation Improvement Program (TIP)
- Regional Convener



Agenda

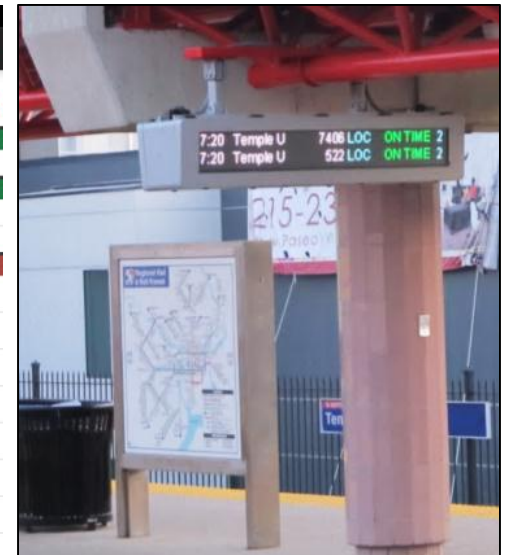
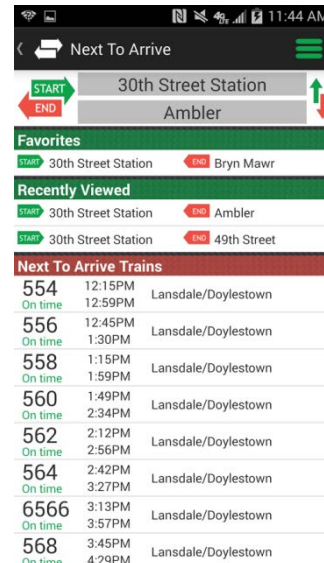
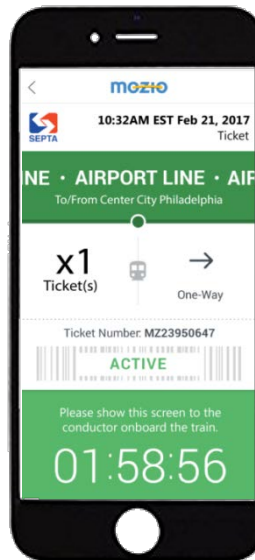
Connected Transportation Projects

Challenges

- Funding
- Big Picture Change
- Adapting a New 'Theory of Transportation'

A New Regional Vision

Transit Information Technology



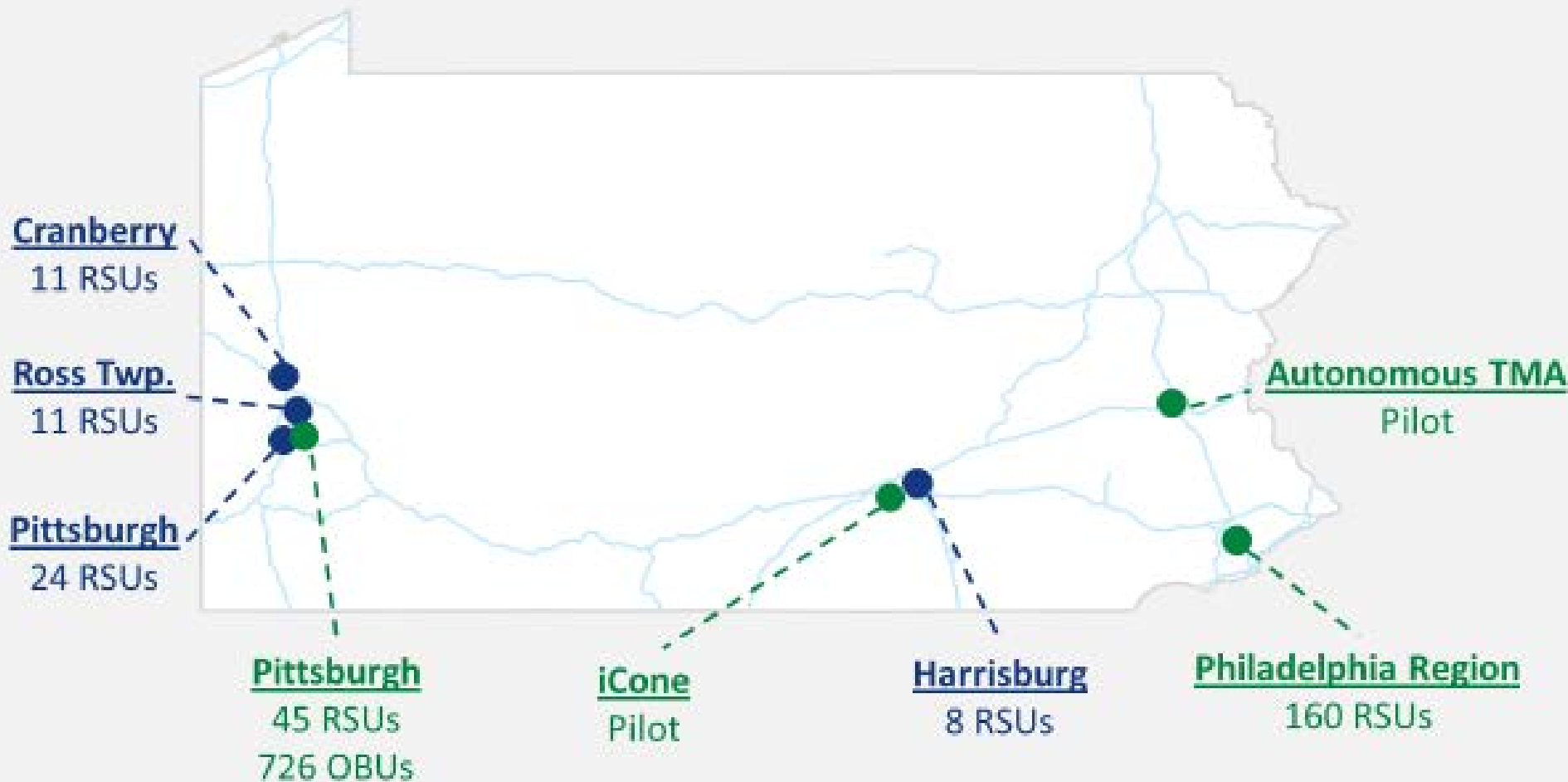
I-76 Integrated Corridor Management



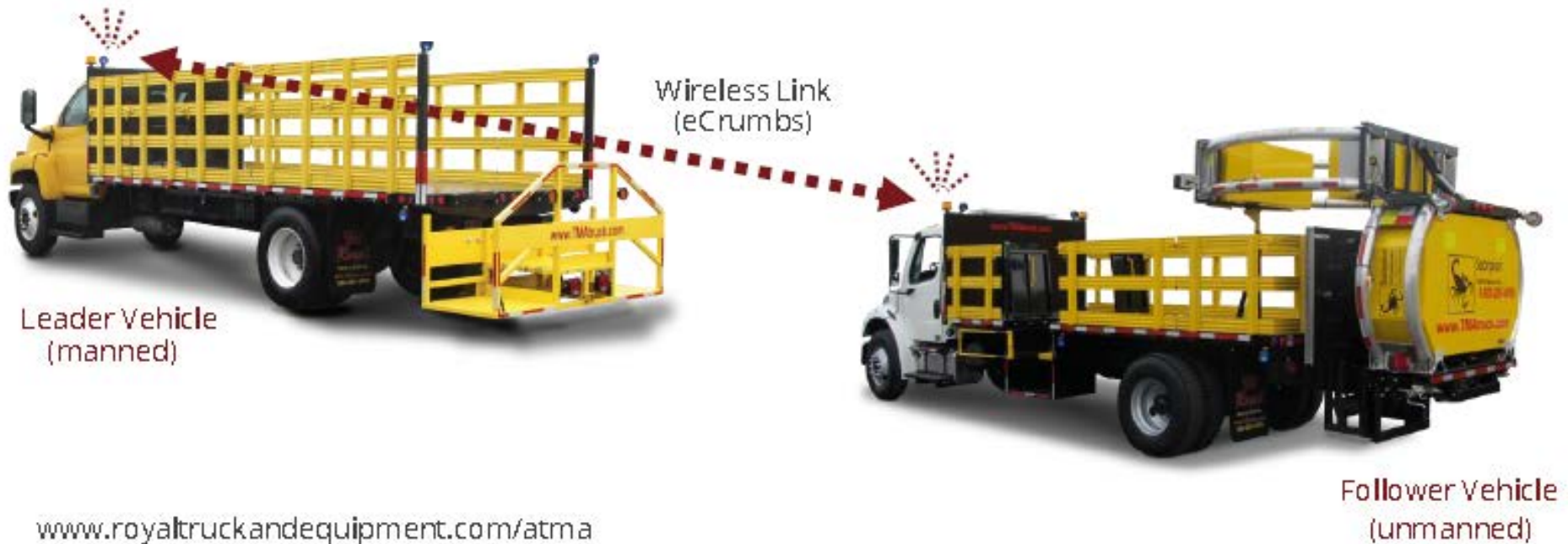
V2I Deployments

CURRENT

PLANNED



Autonomous TMA





THE INSTANT I.T.S. SYSTEM

LATEST NEWS

TxDOT unveils new merging strategy

By Cody Weems, Temple Daily Telegram Published: January 24, 2017 The Texas Department of Transportation will soon implement a new way for ... [Read More](#)



**The iCone locates itself,
monitors traffic speed
and links to the web,
but it looks like a traffic
barrel to the public.**



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Harrisburg Autonomous Shuttle



Source: Local Motors



Source: PennDOT



Source: Harrisburg International Airport



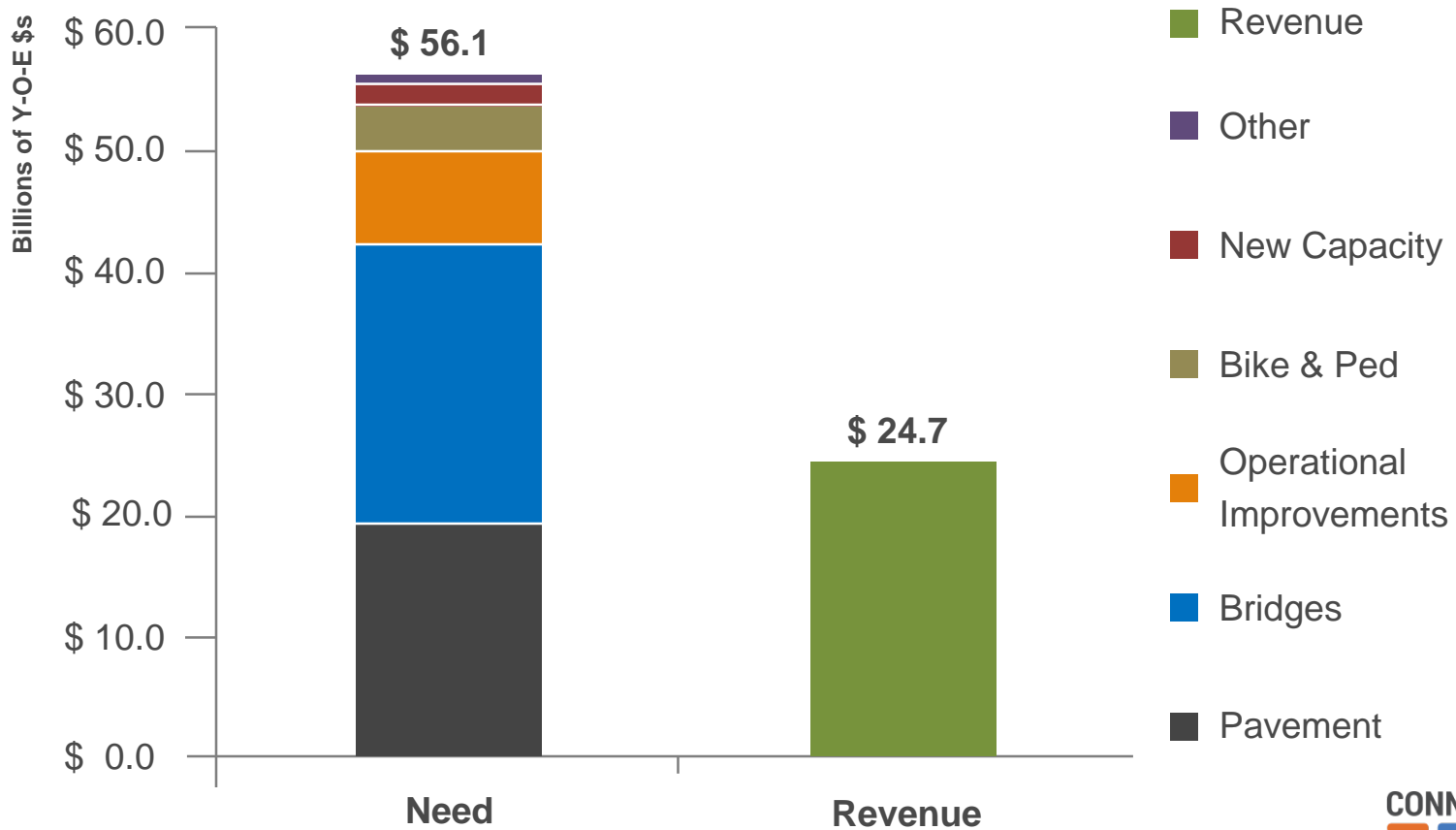
Source: Penn St. Harrisburg

Digital Transportation Services



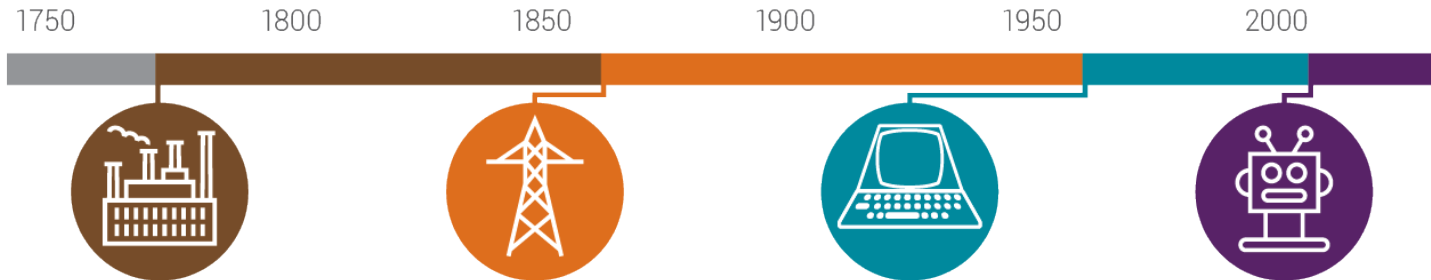
Transportation Funding, 2018-2045

SE Pennsylvania Roadways



The Big Picture

4 Industrial Revolutions:

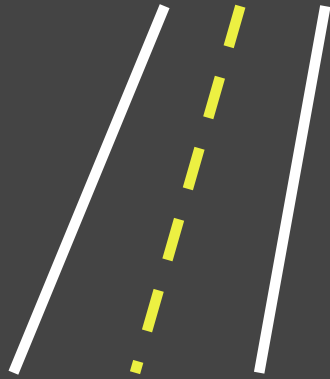


	FIRST (1770s)	SECOND (1870s)	THIRD (1960s)	FOURTH (2010s)
Technology	Steam Power Mechanical Production	Electricity Mass Production	Electronics & Computers Automated Production	Robotics & AI 3-D Printing ???
Urban Form	Factories	Skyscrapers & Elevators Suburbanization	Globalization (Deindustrialization) Internet & e-commerce	Smart Cities & IoT Networked Space ???
Transportation	Canals Railroads	Subways & Trolleys Cars, Buses, Trucks Airplanes	ITS Real-Time Transport Space Exploration	CVs & HAVs UASs (Drones) ???

Adapted from World Economic Forum

The Digital Revolution

Competing Transportation Theories



Auto-Oriented

Increase Mobility

Separation of Uses

New & Wider Roads



Active/Sustainable

Increase Accessibility

Mixed Use, High Density

Walking, Biking, Transit



Digital

Increase Information

Live/Work Where You Want

“Smart” Facilities



THE
**SELF-NAVIGATING
REGION**

"Throw out current thinking and forms of transportation and start again."

"More partnerships with different groups and industries in planning transportation systems."

"Integrate technology better into infrastructure."

"Tax driving In the city."

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Digital Equity Implications

New Technologies & Options Can:

- Lower Transportation Costs
- Improve Access to Jobs & Services
- Enhance Paratransit

Society May Need to:

- Provide Subsidies Based on Need
- Ensure Digital Providers Serve Low-Income Areas
- Develop Prepaid or Digital Banking Options
- Provide Alternative On-Demand Ride-Hailing Methods:
 - Concierge / Corner Store / Phone Call / Kiosk

AN INTEGRATED, MULTIMODAL TRANSPORTATION NETWORK

Real-time info lets people figure out the best way to get around

Big transportation data is becoming abundant

Digital transportation technologies promote **safety & efficiency**

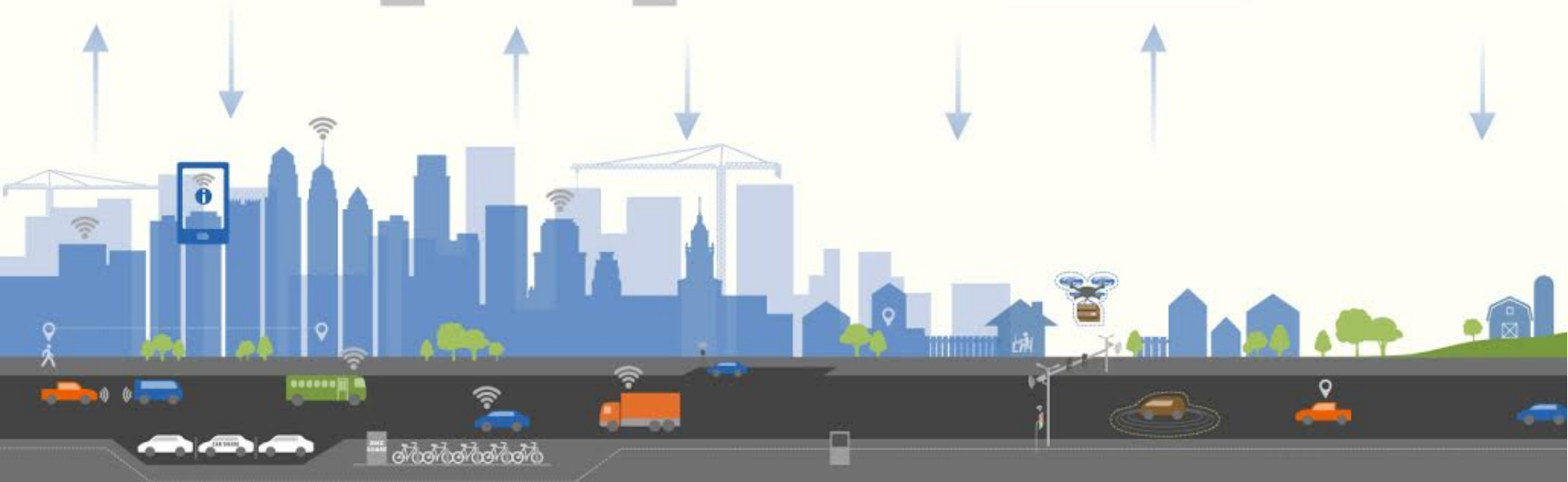
Digitization reinforces **agglomeration economies** & the need for **walkable communities**

Digitization is unleashing creative & **entrepreneurial solutions** to transportation issues

Cybersecurity is a critical new transportation need

PHYSICAL AND VIRTUAL WORLDS ARE MERGING

Digital communications can enrich **community engagement** and services



Thank You!



www.dvrpc.org/connections2045

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